

Amdt. dated December 26, 2006
Reply to Office Action of July 26, 2006

Nick HORGAN
Appl. No. 10/650,154

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-29 are pending in the application, with claims 16, 20, and 21 being the independent claims. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 16-20 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 6,185,568 to Douceur et al. (herein "Douceur"). Applicants respectfully transverse the rejection.

Claim 16 recites a system for packet classification including in part:

a pre-processor to receive a packet header of an incoming packet, the packet header including a field, and to assign an associated identifier to the field...

a third memory device, the third memory device including instructions for applying one of the first and second sets of binary patterns to the associated identifier assigned to the field of the incoming packet; and a processor to apply the instructions to the field to match the field to one of the patterns in the first set of binary patterns or second set of binary patterns.

(see, claim 16)

The Office Action of July 26, 2006 alleges that column 11, lines 30-38 of Douceur teaches "a pre-processor to receive a packet header of an incoming packet, the

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packet header including a field, and to assign an associated identifier to the field" as recited in claim 16. Column 11, lines 30-38 of Douceur provides:

Again, an application program 82 wishes to send data over the network through a network interface card 84 and will pass that information through a plurality of stacked drivers to be processed in succession. The information will initially pass from the application 82 to driver A 86, then to driver B 88, then to driver C 90, and then, finally, to driver 92 before being sent out over the communications network under the control of the network interface card 84.

(see, Douceur, col. 11, lines 30-38)

In other words, column 11, lines 30-38 of Douceur merely refers to data flow over a network. Clearly this does not teach "a pre-processor to receive a packet header of an incoming packet, the packet header including a field, and to assign an associated identifier to the field" as recited by claim 16.

The Office Action further alleges that column 8, lines 59-65 of Douceur teaches "a third memory device, the third memory device including instructions for applying one of the first and second sets of binary patterns to the associated identifier assigned to the field of the incoming packet" as recited in claim 16. Column 8, lines 59-65 of Douceur provides:

Because a single software component, such as a driver, may have multiple classification needs, it may be viewed as multiple clients as seen by the centralized packet classifier. In other words, the centralized packet classifier does not necessarily distinguish the origin of classification requests. It is simply a means for classifying network communications packets.

(see, Douceur, col. 8, lines 59-65)

In other words, column 8, lines 59-65 of Douceur merely refers to a centralized packet classifier for classifying network communications. Clearly this does not teach "a third memory device, the third memory device including instructions for applying one of

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the first and second sets of binary patterns to the associated identifier assigned to the field of the incoming packet" as recited by claim 16.

The Office Action additionally alleges that column 9, lines 3-22 of Douceur teaches "a processor to apply the instructions to the field to match the field to one of the patterns in the first set of binary patterns or second set of binary patterns" as recited in claim 16. Column 9, lines 3-22 of Douceur provides:

A "reference pattern" is a pattern having associated therewith certain classification information that can be used by a particular driver or software component and is held in a database by the centralized packet classifier. A "specific reference pattern" is a reference pattern having specific values for each and every value therein. A "general reference pattern" is a reference pattern having one or more wildcards contained therein that may have any value such that different patterns may match the general reference pattern. In this manner, a general reference pattern can be viewed as a short-hand way of specifying a group or set of specific reference patterns.

A "classification pattern" is a pattern presented to the generalized packet classifier by a driver or other client and is made from actual values of a packet to be classified. If the classification pattern is matched with a reference pattern (either specific or general) then access is returned to the driver to classification information associated with the matched reference pattern that can be used by the driver to process the packet according to its classification.

(see, Douceur, col. 9, lines 3-22)

In other words, column 9, lines 3-22 of Douceur merely defines a classification pattern. This does not teach "a processor to apply the instructions to the field to match the field to one of the patterns in the first set of binary patterns or second set of binary patterns" as recited by claim 16. Accordingly, Applicants request that the rejection of claim 16 be reconsidered and withdrawn.

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Claims 17-19 directly or indirectly depend from independent claim 1. Therefore, claims 17-19 should be allowable for at least the same reasons as discussed above with respect to claim 1, in addition to their own patentable features.

The Office Action alleges "claim 20 is rejected on the same rationale as previously rejected claim 16." In view of the reasons provided above in regard to claim 16, Applicants request that the rejection of claim 20 be reconsidered and withdrawn.

Claims 21-36 stand rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 6,892,237 to Gai et al. (herein "Gai"). Applicants respectfully transverse the rejection.

Claim 21 recites an apparatus for packet classification including in part:

(b) an instruction decoder to suspend operations for a set of the processing elements and to restart operations for the set of processing elements...

(see, claim 21)

The Office Action alleges that column 7, lines 58-67 of Gai teaches "an instruction decoder to suspend operations for a set of the processing elements and to restart operations for the set of processing elements" as recited in claim 21. Column 7, lines 58-67 of Gai provides:

The pattern matching engine 260 further includes a message buffer 306 for storing a network message to be evaluated, and a barrel shifter 308 that is connected to the message buffer 306 and operatively controlled by the decoder circuit 302 as illustrated by control arrow 312. The barrel shifter 308 is configured to reveal a selected segment or portion of the message stored in buffer 306 as directed by the decoder circuit 302. Decoder circuit 302 essentially "slides" the barrel shifter 306 along the message buffer 306 as illustrated by double arrow 313 so as to reveal the selected window.

(see, Gai, col. 7, lines 58-67)

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In other words, column 7, lines 58-67 of Gai merely describes the operation of a barrel shifter. Clearly this does not teach "an instruction decoder to suspend operations for a set of the processing elements and to restart operations for the set of processing elements" as recited by claim 21.

Claims 22-36 directly or indirectly depend from independent claim 21. Therefore, claims 22-36 should be allowable for at least the same reasons as discussed above with respect to claim 22, in addition to their own patentable features.

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Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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